DOCUMENT RESUME

ED 464 588 HE 034 934

TITLE	Access to the UW System: Service Rates by Family Income. Occasional Research Brief.
INSTITUTION	Wisconsin Univ. System, Madison. Office of Policy Analysis and Research.
PUB DATE	2001-06-00
NOTE	25p.; Volume 01, No. 1.
AVAILABLE FROM	University of Wisconsin System, Office of Policy Analysis and Research, 1534 Van Hise Hall, 1200 Linden Drive, Madison, WI 53706. Tel: 608-262-6441. For full text: http://www.uwsa.edu/opar.
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Access to Education; *College Applicants; College Entrance Examinations; *Family Income; *High School Graduates; Higher Education; Low Income Groups; Middle Class
IDENTIFIERS	*University of Wisconsin

ABSTRACT

Maintaining a high service rate (defined as the proportion of high school graduates enrolling at a University of Wisconsin (UW) System institution for the following fall term) for Wisconsin high school graduates is one of the goals identified in the second phase of accountability reporting by the UW System. The population of 1999 Wisconsin high school graduates who took the American College Testing program assessment (ACT) was used to examine application and enrollment patterns by family income, race, and gender. Of the almost 64,000 Wisconsin high school graduates in 1999, approximately 42,000 (66%) took the ACT examination, and 87% of this group answered the question about family income. Slightly more than one-third of Wisconsin ACT takers come from families with incomes of $60,000 and over, and 46% come from families with incomes between $30,000 and $60,000. Application rates (application to Wisconsin institutions) increase as income increases. In the lowest income group, application rates of students of color and whites are similar, but at middle and higher income ranges, white students have higher application rates. Admission rates for applicants from the lowest income group are only slightly lower than those for applicants from other income ranges, and this pattern holds true for race and gender across income groups. Findings show family income to be a key variable in determining who applies to and enrolls in a UW institution. Six appendixes contain tables of study data. (Contains 18 tables, 9 figures, and 6 endnotes.) (SLD)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 464 588

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
S. Wilhelm
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Occasional Research Brief Vol.01 No.1 June 2001

Access to the UW Sysem: Service Rates by Family Income

The University of Wisconsin System

BEST COPY AVAILABLE

The University of Wisconsin System

Occasional Research Brief

Volume 01, No. 1: June 2001

Access to the UW System: Service Rates by Family Income

Executive Summary

Maintaining a high service rate (defined as the proportion of high school graduates enrolling at a UW institution for the following fall term) for Wisconsin high school graduates is one of the goals identified in *Achieving Excellence*, the second phase of accountability reporting by the UW System. Understanding the factors that contribute to the UW System's service rate and the degree to which this service is provided to all Wisconsin residents is critical to the UW System's ability to achieve its goal of enrolling at least 32% of Wisconsin's high school graduating class.

A recent research brief, *Access to the UW System for Wisconsin High School Graduates*, examined the UW System's service rate by race and gender. Variations in service rates were observed and were explained by differences at various stages of the processes that precede enrollment at a UW institution. These processes include taking the ACT examination, submitting an application to a UW institution, being admitted, and enrolling. This research brief expands the analysis of the "enrollment process" to include family income and examines whether high school students of all family income levels are applying to and enrolling at UW institutions. The role of financial aid in providing higher education opportunities for lower income students is also explored.

The income ranges of the population of ACT test takers were used to examine the application and enrollment behavior by income level. Overall, slightly more than one third (36%) of Wisconsin ACT test takers come from families with incomes of $60,000 and over. Forty-six percent (46%) of Wisconsin ACT test takers come from families with incomes between $30,000 and $60,000 and the remaining 18% are from families with incomes of $30,000 or less. ACT test takers of color are considerably poorer than their white peers with 45% coming from families with incomes of $30,000 or less. This compares to 15% of white ACT test takers who have family incomes of $30,000 or less. Compared to females, a slightly higher proportion of male ACT test takers come from families with incomes of $60,000 and over and a slightly lower proportion come from families with incomes of $30,000 and under.

Application rates (defined as the proportion of ACT test takers who apply to at least one UW institution) increase as income increases. For test takers from the lowest income group (family incomes of $30,000 and under), application rates for students of color and whites are similar. However, at the middle and highest income ranges ($30,000-$60,000 and $60,000 and over, respectively), white students have higher application rates. Application rates for males are only slightly lower at each income range than application rates for females.

Admission rates (defined as the proportion of applicants with complete applications who are admitted) for applicants from the lowest income group are only slightly lower than for applicants from the middle and highest income ranges. This pattern holds true when examining admission rates by race and gender across income groups.

HE03493

The University of Wisconsin System
Office of Policy Analysis and Research

http://www.uwsa.edu/opar/

1534 Van Hise Hall
1220 Linden Drive
Madison, Wisconsin 53706
(608) 262-6441

Executive Summary – continued

Yield rates (proportion of admits who enroll) vary somewhat by income. The highest yield rates are for admits in the middle income group ($30,000-$60,000) and the lowest yield rates are for admits in the highest income group. Across all income groups, yield rates for students of color are considerably lower than yield rates for white students. In each income group, yield rates for males differ only slightly from yield rates for females.

Variations in the application, admission and yield rates result in enrollment differences across income groups. For every 100 ACT test takers with family incomes of $30,000 and under, 40 enroll for the fall following high school graduation. This compares to 49 students from the middle income group and 52 students from the highest income group who enroll.

The research brief, *Access to the UW System for Wisconsin High School Graduates*, showed differences by race/ethnicity in the proportion of high school graduates enrolling for the following fall. These differences were shown to be the result of variations by race/ethnicity in all three steps of the enrollment process (application, admission, and enrollment). This research brief shows that these variations persist across all income levels. Although admission and yield rates vary somewhat by race/ethnicity and income level, the income differences in the proportion of ACT test takers of color and white ACT test takers who enroll are primarily due to differences in application rates between the lowest and highest income students.

Access to the UW System for Wisconsin High School Graduates showed that differences by gender in the proportion of high school graduates enrolling for the following fall resulted primarily from differences in ACT test taking rates by gender. Specifically, males took the ACT in lower proportions than females. After this initial significant difference, application, admission, and yield rates varied only slightly by gender. This research brief shows that these rates are still similar by gender when examining the data by income level.

Financial aid, particularly grant aid, makes higher education more affordable for lower income students. Of the ACT test takers in the lowest income group who enrolled at a UW institution, 75% received a need-based grant during their freshman year. For students from the lowest income families, more than half of their family income is needed to cover the average cost of attendance at a UW institution. After need-based grants are awarded, the proportion of income needed to cover the average cost of attendance is reduced to one-quarter of family income.

In conclusion, this research brief shows that family income is a key variable in determining who applies to and enrolls at a UW institution. Applying to a UW institution is the step most affected by family income and there are large variations by income group in the proportion of students who apply. The proportion of admits who enroll also varies with income, although not nearly as much as the proportion who apply. Need-based grants play a vital role in equalizing these income differences and directly increase the affordability of a college education for the lowest income students.

Table of Contents

INTRODUCTION 1

SECTION I:

ACT Test Takers 2

SECTION II:

Family Income and Application Patterns 3

SECTION III:

Family Income and Admission Patterns 5

SECTION IV:

Family Income and Enrollment Patterns 7

SECTION V:

The Road to Access 9

SECTION VI:

The Role of Financial Aid 11

SUMMARY AND CONCLUSIONS 15

APPENDICES 16

END NOTES 19

INTRODUCTION

Maintaining a high service rate (defined as the proportion of high school graduates enrolling at a UW institution for the following fall term) for Wisconsin high school graduates is one of the goals identified in *Achieving Excellence*, the second phase of accountability reporting by the UW System. Understanding the factors that contribute to the UW System's service rate and the degree to which this service is provided to all Wisconsin residents is critical to the UW System's ability to achieve its goal of enrolling at least 32% of Wisconsin's high school graduating class.

Recent national studies from the American Council on Education and the National Center for Education Statistics have focused attention on how family income, race and gender affect access to higher education and educational choice. A recent research brief, *Access to the UW System for Wisconsin High School Graduates*, showed that, while the UW System has a high service rate for recent high school graduates, there are race and gender differences in this service rate.

Overall, data in *Access to the UW System for Wisconsin High School Graduates* showed that almost half of the Wisconsin high school graduates who took the ACT enrolled at a UW institution for the fall following graduation and that 33% of Wisconsin high school graduates enrolled at a UW institution for the following fall. This research brief examines the role of family income in access and the role of financial aid in assisting lower income students.

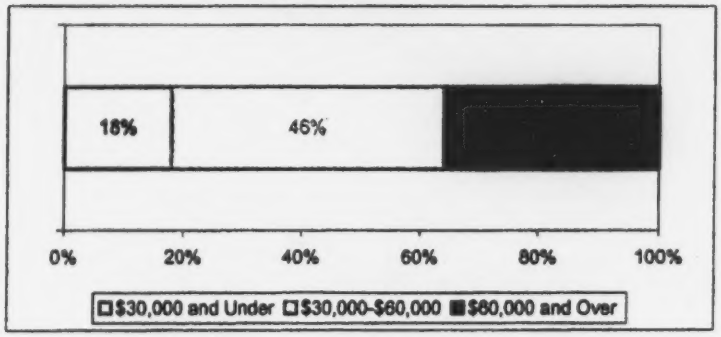
The population of 1999 Wisconsin high school graduates who took the ACT, a requirement for admission to UW institutions, was used to examine application and enrollment patterns by family income, race and gender. Because the ACT was a requirement of all potential UW resident students, taking the ACT can be used for this group as an indication of initial interest in post-secondary education.

Of the almost 64,000 Wisconsin high school graduates in 1999, approximately 42,000, or 66%, took the ACT examination. Eighty-seven percent (approximately 37,000) of this group of test takers answered the question about family income. Responses to this question were used to group test takers into three broad categories that correspond most closely to groupings used by the U.S. Department of Education and the American Council on Education (ACE) in recent publications. The lowest income group represents ACT test takers with family incomes of $30,000 and under. The middle income group includes ACT test takers with family incomes between $30,000 and $60,000 and the highest income group represents those with family incomes of $60,000 and over.

SECTION I:
ACT Test Takers

Of the Wisconsin high school graduates in 1999 who took the ACT, 18% reported family incomes of $30,000 or less (Figure 1). Forty-six percent (46%) reported family incomes between $30,000 and $60,000 and 36% reported incomes of $60,000 and over.

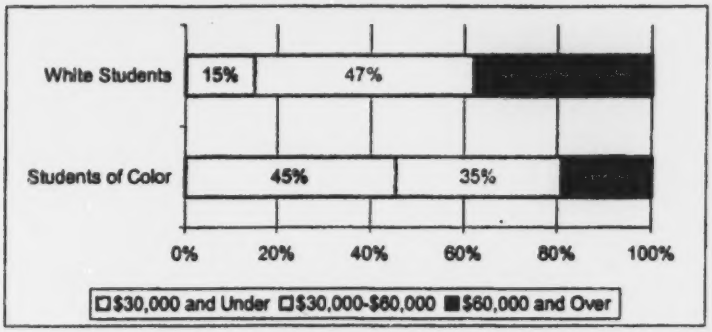
Figure 1
1999 Wisconsin High School Graduates who Took the ACT by Income Group



Data reported in *Access to the UW System for Wisconsin High School Graduates* showed that approximately 10% of the total ACT test takers are high school students of color and that approximately 10% of the Wisconsin high school graduating class is made up of students of color. Despite the equal proportions of ACT test takers of color and high school graduates of color, large income differences by race can be seen in the distribution of Wisconsin high school graduates who took the ACT.

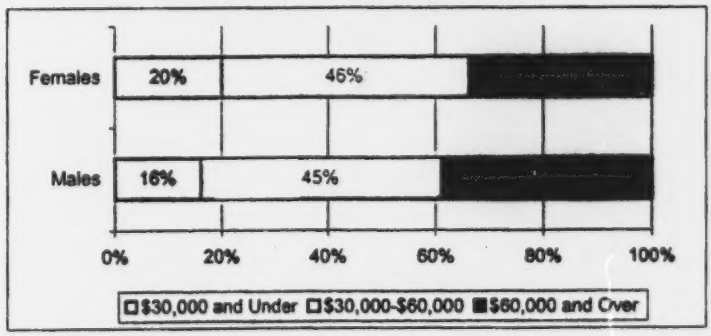
Forty-five percent (45%) of ACT test-takers of color reported family incomes of $30,000 or less compared to 15% of white students (Figure 2). Thirty-eight percent (38%) of white ACT test takers reported family incomes of $60,000 and over compared to 19% of students of color. Although ACT test takers of color are poorer than their white peers, both high school students of color and white high school students are taking the ACT at the same rate (approximately 66%).

Figure 2
1999 Wisconsin High School Graduates who Took the ACT
by Income Group and Race/Ethnicity



Even though the Wisconsin high school graduating class is almost equally distributed between men and women, male high school students constitute only 44% of the ACT test taking population[1]. Compared to females, a lower proportion of male ACT test takers are in the lowest income group (Figure 3). Almost equal proportions are in the middle income group while a greater proportion of male ACT test takers are in the highest income group (39% of men compared to 34% of women).

Figure 3
1999 Wisconsin High School Graduates who Took the ACT
by Income Group and Gender



SECTION II:
Family Income and Application Patterns

Figure 4 shows application rates (the proportion of ACT test takers who applied to at least one UW institution) for Wisconsin high school graduates in 1999 who took the ACT. ACT test takers in the lowest income group had the lowest application rates (55%) and ACT test takers in the highest income group had the highest application rates (71%).

Recent national studies have shown a relationship between family income and actual college enrollment. Moreover, these data suggest that, at least for UW institutions, family income is influencing behavior as early as the application process.

Figure 4
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Application Rates for Fall 1999
by Income Group

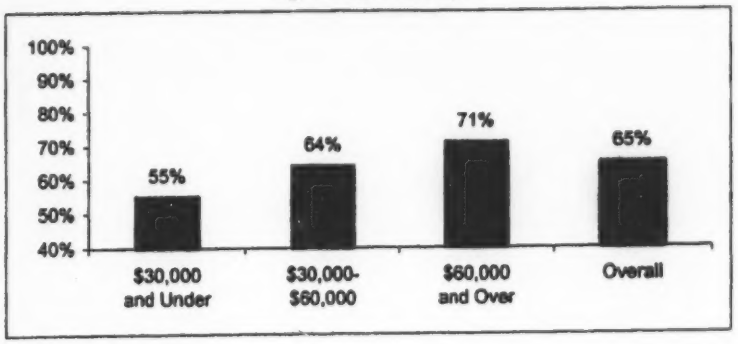
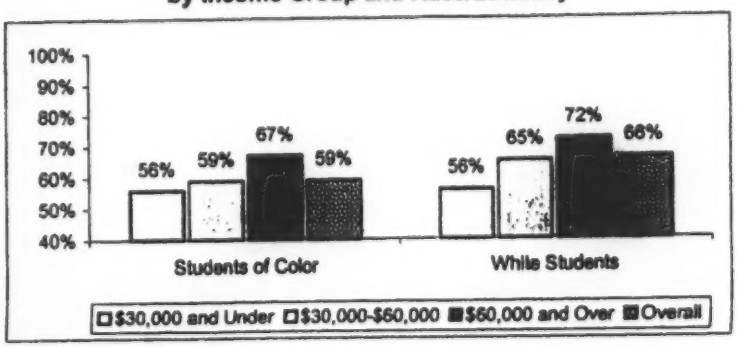


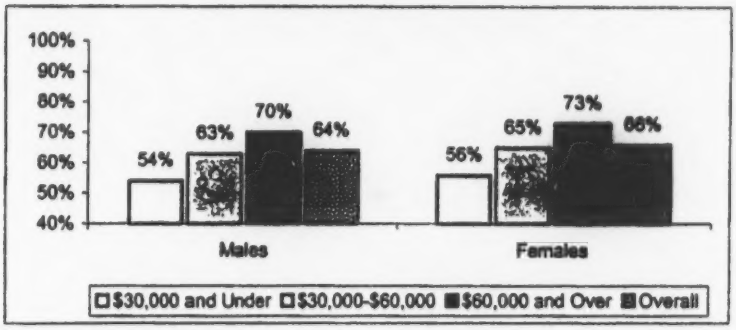
Figure 5 shows the UW System application rates of Wisconsin high school graduates in 1999 who took the ACT by race and income group. For both white students and students of color, lower income students have lower application rates. Fifty-six percent (56%) of low income white students and students of color who took the ACT and graduated in 1999 applied to at least one UW institution for Fall 1999. The proportion of Wisconsin high school graduates in 1999 who took the ACT and applied to a UW institution for Fall 1999 increased to 67% for students of color with family incomes of $60,000 and over and to 72% for white students with family incomes of $60,000 and over.

Figure 5
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Application Rates for Fall 1999
by Income Group and Race/Ethnicity



The pattern of application rates increasing with income also holds true when examining these rates by gender (Figure 6). For Wisconsin ACT test takers with family incomes of $30,000 and below, between 54% and 58% applied to at least one UW institution for Fall 1999 compared to between 70% and 73% of Wisconsin ACT test takers with family incomes of $60,000 and over.

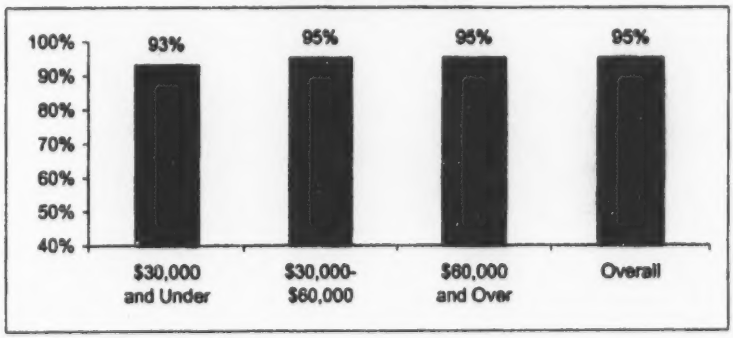
Figure 6
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Application Rates for Fall 1999
by Income Group and Gender



SECTION III:
Family Income and Admission Patterns

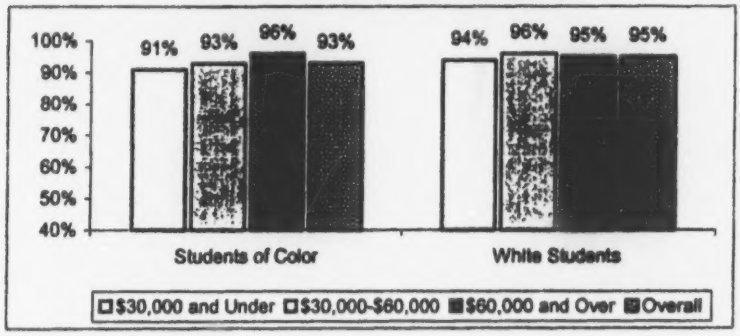
Figure 7 shows that admission rates vary little by family income. Admission rates are based on the proportion of applicants who are admitted to at least one UW institution, although not necessarily their first-choice institution. Only applicants with a complete application (all information needed for an admission decision, including the application fee, was submitted) are included in the calculation.

Figure 7
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Admission Rates for Fall 1999
by Income Group



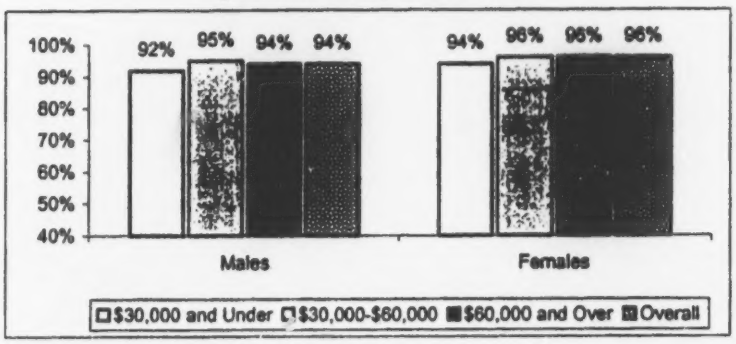
For applicants of color, admission rates vary slightly by income group (Figure 8). Regardless of family income, more than nine out of ten applicants from the 1999 Wisconsin high school graduating class were admitted to at least one UW institution.

Figure 8
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Admission Rates for Fall 1999
by Income Group and Race/Ethnicity



Consistent with both the overall admission rates and admission rates for white applicants, admission rates vary little by gender and family income group (Figure 9).

Figure 9
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Admission Rates for Fall 1999
by Income Group and Gender



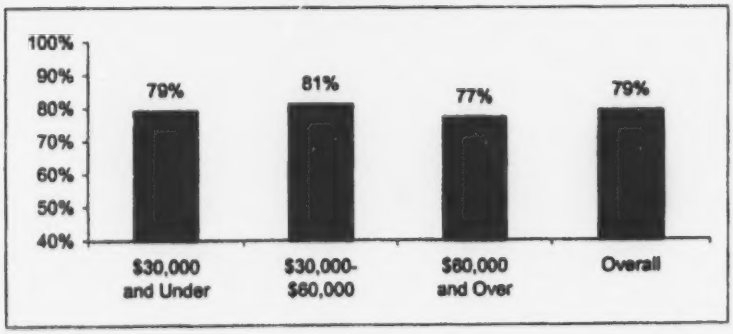
SECTION IV: Family Income and Enrollment Patterns

Yield rates, the proportion of admitted applicants who enroll, vary slightly with income although the differences are not as large as the differences seen in application rates by family income. The highest yield rates (81%) are from admits in the middle income grouping of $30,000-$60,000 (Figure 10).

The lower yield rates (77%) for admits from the highest income group likely reflects the greater number of institutional choices available to higher income students. A recent national study found that students from families with incomes of $60,000 and over were more likely than their lower income peers to enroll in private, not-for-profit four-year institutions[2].

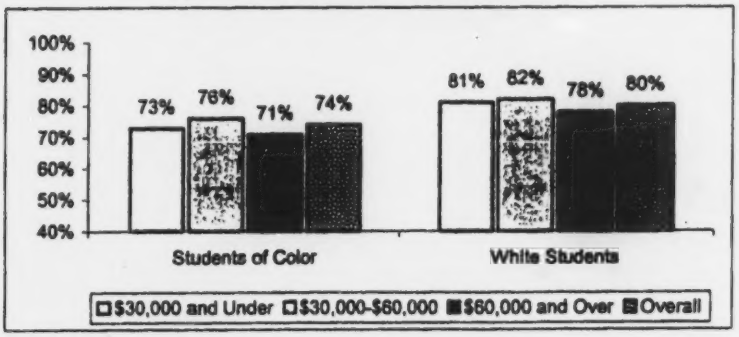
Indeed, higher income students who applied and were admitted to a UW institution but did not enroll were more likely to enroll at a private or out-of-state public institution (other than Minnesota public institutions) than lower income students[3]. Specifically, of the Fall 1999 new freshman applicants to UW institutions who were admitted and had a family income of $60,000 or over, 12% enrolled at these types of institutions compared to 6% of new freshman admits from the lowest income group.

Figure 10
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Yield Rates for Fall 1999
by Income Group



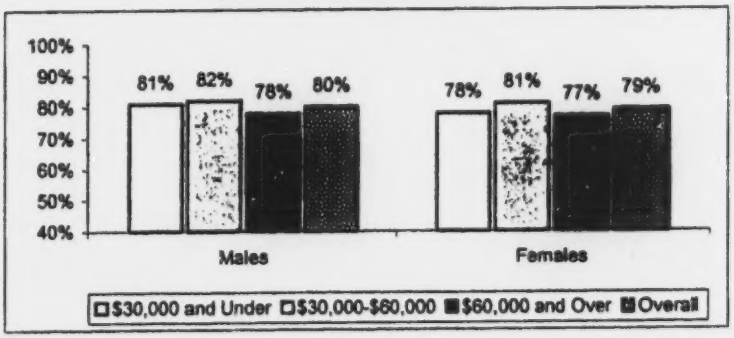
As with the overall figures, data show that for students of color and white students, the highest yield rates are from admits in the $30,000-$60,000 income group. The lowest yield rates are from admits with family incomes of $60,000 and over (Figure 11). For every income group, yield rates for admits of color are considerably lower than yield rates for white admits.

Figure 11
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Yield Rates for Fall 1999
by Income Group and Race/Ethnicity



Examining yield rates by gender shows a similar pattern to the pattern in Figure 10. For both men and women, the highest yield rates are for admits from families with incomes between $30,000 and $60,000 (Figure 12). These rates, however, were only slightly higher than yield rates for admits in other income groups.

Figure 12
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
Yield Rates for Fall 1999
by Income Group and Gender



SECTION V:
The Road to Access

The distribution of ACT test takers by income group (Figures 1-3) showed large differences in the distribution of family income between students of color and white students and fewer differences between men and women. The degree to which these differences persist, grow, or lessen throughout the application and enrollment processes offers insight into the ways family income impacts both potential and actual UW students. The application, admission and yield rates reported in the previous sections were applied to a base of 100 students at each income level to illustrate the impact of family income at the various steps in the enrollment "process".

For every 100 ACT test takers from the lowest family income group, 55 applied to a UW institution for the fall following graduation, 51 were admitted and 40 actually enrolled as new freshmen (Figure 13). This is in contrast to the 71 of 100 ACT test takers from the highest income group who applied, the 67 who were admitted, and the 52 who enrolled as new freshmen.

Figure 13
University of Wisconsin System
Overall Enrollment Funnel
Fall 1999

	Family Income Group							
	$30,000 and Under		$30,000-$60,000		$60,000 and Over		Overall	
ACT Test Takers		100		100		100		100
Application Rate	55%	55	64%	64	71%	71	65%	65
Admission Rate	93%	51	95%	61	95%	67	95%	62
Yield Rate	79%	40	81%	49	77%	52	79%	49

Enrollment funnels for students of color (Figure 14) and white students (Figure 15) show similar differences by income group as seen in the overall enrollment funnel (Figure 13). For every 100 ACT test takers from the lowest income group, 56 students of color and 56 white students applied for the fall following graduation. This "enrollment process" resulted in 37 students of color and 43 white students from the lowest income group enrolling. This enrollment process results in more ACT test takers enrolling as income increases. This pattern holds true for both students of color and white students.

In a previous research brief, *Access to the UW System for Wisconsin High School Graduates*, differences were seen by race/ethnicity in the proportion of high school graduates enrolling for the following fall. These differences were shown to be the result of variations by race/ethnicity in the application, admission and yield rates. Figures 14 and 15 show that these differences persist, regardless of income level.

Figure 14
University of Wisconsin System
Enrollment Funnel for Students of Color
Fall 1999

	Family Income Group							
	$30,000 and Under		$30,000-$60,000		$60,000 and Over		Overall	
ACT Test Takers		100		100		100		100
Application Rate	56%	56	59%	59	67%	67	59%	59
Admission Rate	91%	51	93%	55	96%	64	93%	55
Yield Rate	73%	37	76%	42	71%	46	74%	41

White ACT test takers and ACT test takers of color from the lowest income group have the same application rates (56%). ACT test takers of color from the middle and highest income groups have lower application, admission, and yield rates than white ACT test takers. For the lowest income group, differences by race/ethnicity in the proportion of students enrolling are primarily caused by lower yield rates for admits of color. For the middle and highest income groups, enrollment differences by race/ethnicity are due primarily to differences in both application and yield rates.

Figure 15
University of Wisconsin System
Enrollment Funnel for White Students
Fall 1999

	Family Income Group							
	$30,000 and Under		$30,000-$60,000		$60,000 and Over		Overall	
ACT Test Takers		100		100		100		100
Application Rate	56%	56	65%	65	72%	72	66%	66
Admission Rate	94%	53	96%	62	95%	68	95%	63
Yield Rate	81%	43	82%	51	78%	53	80%	50

Enrollment funnels for males (Figure 16) and females (Figure 17) show the same differences by income group as seen overall (Figure 13) and between students of color and white students. For every 100 ACT test takers from the lowest income group, 54 men and 56 women applied for the fall following graduation. Forty (40) men and 41 women from the lowest income group enrolled. This compares to the 51 men and 54 women from the highest income group who enrolled in the fall term following high school graduation.

In *Access to the UW System for Wisconsin High School Graduates*, differences by gender in the proportion of high school graduates enrolling for the following fall were seen. These differences resulted primarily from differences in ACT test taking rates by gender. Males were found to be taking the ACT in lower proportions than females. After this initial difference, application, admission and yield rates were similar for males and females.

Figure 16
University of Wisconsin System
Enrollment Funnel for Male Students
Fall 1999

	Family Income Group							
	$30,000 and Under		$30,000-$60,000		$60,000 and Over		Overall	
ACT Test Takers		100		100		100		100
Application Rate	54%	54	63%	63	70%	70	64%	64
Admission Rate	92%	50	95%	60	94%	66	94%	60
Yield Rate	81%	40	82%	49	78%	51	80%	48

Within each income group, differences in application, admission and yield rates between males and females are slight. However, across income groups for both males and females, the number of ACT test takers enrolling increases as income increases.

Figure 17
University of Wisconsin System
Enrollment Funnel for Female Students
Fall 1999

	Family Income Group							
	$30,000 and Under		$30,000-$60,000		$60,000 and Over		Overall	
ACT Test Takers		100		100		100		100
Application Rate	56%	56	65%	65	73%	73	66%	66
Admission Rate	94%	53	96%	62	96%	70	96%	63
Yield Rate	78%	41	81%	51	77%	54	79%	50

SECTION VI: The Role of Financial Aid

In the 1960's and 1970's, public policy initiatives reduced barriers to higher education for students from lower income families. During this time period, many federal and state grant programs for low income students were created. Since these students have limited personal and family resources and often do not have access to private sources of financial assistance, the affordability of a college education is heavily influenced by the availability of financial assistance, particularly grant aid.

Table 1 shows that 75% of the resident new freshmen from families with incomes of $30,000 and less received need based grants in 1999-00; however the average need based grant was only $3,573[4]. Since the average cost of attendance at a UW institution (tuition, room/board, books, travel allowance, miscellaneous expenses) for the 1999-00 year was $9,427, almost $6,000 more was still needed to enable the lowest income students to attend a UW institution. Since families in this income range are unlikely to be able to afford that large a contribution, the additional cost has to be made up through loans and work. For example, 65% of new freshmen in the lowest income group utilized a federally-subsidized need-based loan in addition to their grant aid.

For new freshmen from the middle income group, the type of financial aid most frequently utilized was need-based loans. Sixty-four (64%) percent of these students borrowed through a federally subsidized need-based loan program. For new freshmen from the highest income group, 57% borrowed through a non need-based loan program, the most frequently utilized type of financial aid for students in this income group.

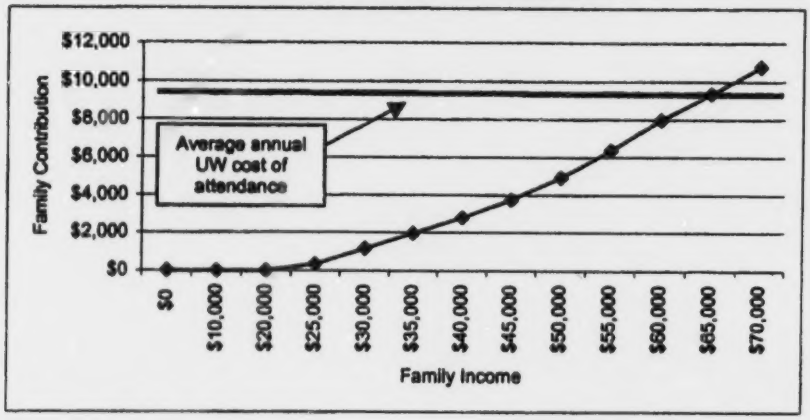
Table 1
University of Wisconsin System
1999-00 Dependent, Resident, New Freshman Financial Aid Recipients who Took the ACT
by Type of Aid Received and Income Group

	$30,000 and Under		$30,0000-$60,000		$60,000 and Over		Overall	
	%	#	%	#	%	#	%	#
Need-Based Grants	75%	1,527	36%	1,291	6%	142	32%	2,960
Need-Based Loans	65%	1,329	64%	3,208	30%	690	56%	5,227
Non Need-Based Grants	42%	862	42%	2,116	43%	993	43%	3,971
Non Need-Based Loans	10%	214	32%	1,604	57%	1,315	34%	3,133
Work Study	27%	543	18%	893	4%	101	1%	1,537
Unduplicated Total		2,043		4,984		2,292		9,319

Financial aid policy is predicated on the assumption that families have the primary responsibility of paying for post-secondary education. Since almost all of the students who enroll in college immediately after high school are dependent on their parents, parental income and liquid assets are the main determinants of the "expected family contribution". This is the result of a federal formula that determines how much money a family should be expected to contribute towards higher education expenses. Students from families whose expected family contribution, or EFC, is less than the cost of attendance are said to have "financial need" and are eligible for need-based aid.

Figure 18 shows the average EFC by family income range based on a hypothetical family with 45-year-old parents with no assets and one dependent child in college who had no taxable income[5]. There are several factors influencing the EFC calculation (age of parent, student earnings, assets, number of children in college, family circumstances). Holding these factors constant while changing family income shows an approximate amount that a family would be expected to contribute towards higher education costs. In this hypothetical example, a family with approximately $65,000 in income would be expected to contribute the full annual cost of a UW education (approx. $9,400).

Figure 18
Expected Family Contribution by Family Income for 1999-00 Academic Year
Based on Web-Based EFC Calculator



The broad purpose of need-based grant programs is to reduce the cost of higher education for families who cannot meet the costs on their own. Since these types of grants do not need to be repaid (in contrast to loans), grants directly increase affordability for needy families. The concept of "net price", or the cost of attendance minus all need-based grant aid, can be used to assess how successfully need-based grants equalize costs across income levels.

Table 2 shows need-based grant recipients grouped by EFC. Students from families where federal methodology determined that the family could not afford any contribution had an average family income of $15,427 and an average net price of $4,080. Students from families who were deemed able to contribute between $4,000 and $10,000 towards their child's college education had an average family income of $57,650 and an average net price of $8,730. Without any need-based grants, a family with $15,000 income would have spent 59% of their income to pay the cost of attending a UW institution. Families in the $60,000 income range, who are deemed able to contribute $4,000 or more towards educational costs, spent approximately 19% of their income on the cost of attendance at a UW institution.

The lower half of this table shows that a hypothetical student whose family income is between $100,000 and $200,000 does not qualify for a need-based grant because the EFC is equal to or greater than the cost of education. For students from these families, the cost of attendance is between 5% and 9% of the family's income.

Table 2
University of Wisconsin System
Dependent, Resident, Undergraduates who Received Need-Based Grants[a]
1999-00

			Average				
EFC Range	#	Percent	Gross Family Income	Need-Based Grants	Net Price*	Cost as % of Income	Net Price as % of Income
$0	2,043	15%	$15,427	$5,065	$4,080	59%	26%
$1-$999	3,426	25%	$24,846	$3,882	$4,997	36%	20%
$1,000-$1,999	3,844	29%	$32,310	$2,063	$7,135	28%	22%
$2,000-$2,999	3,459	26%	$38,549	$1,131	$8,443	25%	22%
$3,000-$3,999	269	2%	$41,603	$1,539	$8,376	24%	20%
$4,000 - $10,000	422	3%	$57,650	$1,996	$8,730	19%	15%
Examples for			$100,000	$0	$9,427	9%	9%
students who did			$125,000	$0	$9,427	8%	8%
not qualify for			$150,000	$0	$9,427	6%	6%
need-based			$175,000	$0	$9,427	5%	5%
grants.			$200,000	$0	$9,427	5%	5%

*Net price = cost of attendance less need-based grants. Net price for examples below dotted line based on average cost of attendance for 1999-00.

Families with approximately $15,000 income, who would have spent over half of it on the cost of attendance at a UW institution, realize a reduction to one quarter of income after need-based grants are awarded. Need-based grants reduce and level out the net price of attendance at a UW institution for families with incomes below $60,000. However, net price decreases greatly as a percentage of income for families with higher incomes.

The federal Pell Grant program (the largest federal grant program for needy students) has the most impact on the net price for the lowest income students. In the early to mid 1980's, Pell Grants covered almost all of tuition/fees at UW institutions enabling the lowest income students to participate in higher education (Table 3). By the 1999-00 academic year, the proportion of average UW tuition/fees covered by Pell Grants had decreased to 53%.

Table 3
University of Wisconsin System
Average Pell Grant Awards to Dependent, Resident, New Freshmen

	Average Pell Award	Average Pell Award as % of Tuititon/Fees
1983-84	$985	92%
1985-86	$1,222	97%
1987-88	$1,256	83%
1989-90	$1,328	78%
1991-92	$1,404	71%
1993-94	$1,396	61%
1995-96	$1,410	55%
1997-98	$1,573	54%
1999-00	$1,756	53%

SUMMARY AND CONCLUSIONS

This research brief shows that family income is a key variable in determining who applies to and enrolls at a UW institution. Understanding how and when family income most affects application and enrollment behaviors is critical to the UW System's ability to maintain a high service rate for all students.

Applying to a UW institution is the step most affected by family income and there are large variations by income group in the proportion of students who apply. The students from the lowest income group apply at lower rates than students from the middle income group. In turn, students from the middle income group apply at lower rates than students from the highest income group.

For every 100 ACT test takers from the highest income group, over half enroll for the following fall at a UW institution. This proportion decreases as income decreases. For students from the lowest income group, the enrollment process results in 40 students enrolling.

Since data in this research brief show that many low income high school students are not even applying to UW institutions, efforts to encourage these students to apply need to start early in high school and must include information about the availability of financial aid. Data suggest that successful efforts in this area would have the greatest effect on the UW System's service rate. Demonstrating the long term value of higher education participation, particularly to the lowest income students, coupled with need-based grant aid to enable participation will likely increase the UW System's service rate to students from the lowest income families. Since there is a higher proportion of students of color than white students in the lowest income group, efforts to increase participation on the part of lower income students would likely also increase the UW System's service rate for students of color. This would support the goals of *Achieving Excellence* and complement intensified recruitment efforts directed at students of color.

Financial aid, particularly need-based grant aid, aims to equalize educational opportunities across all income levels. Without need-based grants, over half of the lowest income families' income would be spent on the cost of higher education. Need-based grants directly increase the affordability of a college education for these students. The failure of need-based grant programs to keep up with costs of higher education coupled with the limited financial resources of lower income families may explain the lower UW System service rates for the lowest income students.

Maintaining a high service rate for all students is critical to meeting the goals of *Achieving Excellence*. The ability of lower income students to participate in higher education and take advantage of financial aid that reduces the financial burden of participation are key components of this service rate.

APPENDICES

Appendix A
1999 Wisconsin High School Graduates who Took the ACT by Race, Gender and Income Group

		$30,000 and Under	$30,000-$60,000	$60,000 and Over	Total
Students of Color	#	1,444	1,127	609	3,180
	%	45.4%	35.4%	19.2%	100%
White Students	#	4,868	14,875	12,144	31,887
	%	15.3%	46.6%	38.1%	100%
Unreported Race	#	405	804	622	1,831
	%	22.1%	43.9%	34.0%	100%
Male Students	#	2,568	7,467	6,447	16,482
	%	15.6%	45.3%	39.1%	100%
Female Students	#	4,137	9,306	6,902	20,345
	%	20.3%	45.7%	33.9%	100%
Unreported Gender	#	12	33	26	71
	%	16.9%	46.5%	36.6%	100%
Total	#	6,717	16,806	13,375	36,898
	%	18.2%	45.5%	36.2%	100%

Appendix B
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT and Applied to at Least One UW Institution for Fall 1999 by Race, Gender and Income Group

		$30,000 and Under	$30,000-$60,000	$60,000 and Over	Total
Students of Color	#	804	670	405	1,879
	%	42.8%	35.7%	21.6%	100%
White Students	#	2,737	9,640	8,749	21,126
	%	13.0%	45.6%	41.4%	100%
Unreported Race	#	167	429	386	982
	%	17.0%	43.7%	39.3%	100%
Male Students	#	1,382	4,679	4,517	10,578
	%	13.1%	44.2%	42.7%	100%
Female Students	#	2,321	6,045	5,011	13,377
	%	17.4%	45.2%	37.5%	100%
Unreported Gender	#	5	15	12	32
	%	15.6%	46.9%	37.5%	100%
Total	#	3,708	10,739	9,540	23,987
	%	15.5%	44.8%	39.8%	100%

Appendix C
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
and Submitted a Complete Application to at Least One UW Institution for Fall 1999
by Race, Gender and Income Group

		$30,000 and Under	$30,000-$60,000	$60,000 and Over	Total
Students of Color	#	726	632	392	1,750
	%	41.5%	36.1%	22.4%	100%
White Students	#	2,697	9,517	8,661	20,875
	%	12.9%	45.6%	41.5%	100%
Unreported Race	#	163	421	379	963
	%	16.9%	43.7%	39.4%	100%
Male Students	#	1,339	4,596	4,464	10,399
	%	12.9%	44.2%	42.9%	100%
Female Students	#	2,242	5,959	4,957	13,158
	%	17.0%	45.3%	37.7%	100%
Unreported Gender	#	5	15	11	31
	%	16.1%	48.4%	35.5%	100%
Total	#	3,586	10,570	9,432	23,588
	%	15.2%	44.8%	40.0%	100%

Appendix D
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
and were Admitted to at Least One UW Institution for Fall 1999
by Race, Gender and Income Group

		$30,000 and Under	$30,000-$60,000	$60,000 and Over	Total
Students of Color	#	659	588	378	1,625
	%	40.6%	36.2%	23.3%	100%
White Students	#	2,525	9,106	8,245	19,876
	%	12.7%	45.8%	41.5%	100%
Unreported Race	#	149	395	357	901
	%	16.5%	43.8%	39.6%	100%
Male Students	#	1,228	4,355	4,217	9,800
	%	12.5%	44.4%	43.0%	100%
Female Students	#	2,100	5,720	4,752	12,572
	%	16.7%	45.5%	37.8%	100%
Unreported Gender	#	5	14	11	30
	%	16.7%	46.7%	36.7%	100%
Total	#	3,333	10,089	8,980	22,402
	%	14.9%	45.0%	40.1%	100%

Appendix E
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
and Enrolled in Fall 1999
by Race, Gender and Income Group

		$30,000 and Under	$30,000-$60,000	$60,000 and Over	Total
Students of Color	#	484	444	268	1,196
	%	40.5%	37.1%	22.4%	100%
White Students	#	2,045	7,441	6,409	15,895
	%	12.9%	46.8%	40.3%	100%
Unreported Race	#	113	320	266	699
	%	16.2%	45.8%	38.1%	100%
Male Students	#	992	3,555	3,296	7,843
	%	12.6%	45.3%	42.0%	100%
Female Students	#	1,646	4,637	3,641	9,924
	%	16.6%	46.7%	36.7%	100%
Unreported Gender	#	4	13	6	23
	%	17.4%	56.5%	26.1%	100%
Total	#	2,642	8,205	6,943	17,790
	%	14.9%	46.1%	39.0%	100%

Appendix F
University of Wisconsin System
1999 Wisconsin High School Graduates who Took the ACT
and Enrolled in Fall 1999
by Income Group and Institution

		$30,000 and Under	$30,000-$60,000	$60,000 and Over	Total
UW-Madison	#	294	1,163	1,759	3,216
	%	9.1%	36.2%	54.7%	100%
UW-Milwaukee	#	373	926	822	2,121
	%	17.6%	43.7%	38.8%	100%
UW-Eau Claire	#	183	579	532	1,294
	%	14.1%	44.7%	41.1%	100%
UW-Green Bay	#	124	363	218	705
	%	17.6%	51.5%	30.9%	100%
UW-La Crosse	#	141	535	494	1,170
	%	12.1%	45.7%	42.2%	100%
UW-Oshkosh	#	180	743	557	1,480
	%	12.2%	50.2%	37.6%	100%
UW-Parkside	#	114	254	205	573
	%	19.9%	44.3%	35.8%	100%
UW-Platteville	#	146	418	266	830
	%	17.6%	50.4%	32.0%	100%
UW-River Falls	#	108	261	112	481
	%	22.5%	54.3%	23.3%	100%
UW-Stevens Point	#	175	570	395	1,140
	%	15.4%	50.0%	34.6%	100%
UW-Stout	#	105	390	269	764
	%	13.7%	51.0%	35.2%	100%
UW-Superior	#	40	87	47	174
	%	23.0%	50.0%	27.0%	100%
UW-Whitewater	#	196	649	600	1,445
	%	13.6%	44.9%	41.5%	100%
UW Colleges	#	463	1,267	667	2,397
	%	19.3%	52.9%	27.8%	100%
Total	#	2,642	8,205	6,943	17,790
	%	14.9%	46.1%	39.0%	100%

[1] University of Wisconsin System. *Access to the UW System for Wisconsin High School Graduates.* October, 2000
[2] U.S. Department of Education. National Center for Education Statistics. *College Access and Affordability*. 1999
[3] Source: ACT.
[4] Source: Central Data Request, UW System Administration.
[5] Web-based EFC calculator from FinAid!: The Smart Student Guide to Financial Aid (www.finaid.org/calculators).
[6] Does not include DVR aid. Cost is calculated on an individual basis. Family income from the Free Application for Federal Student Aid (FAFSA). EFC based on Federal methodology.

OCCASIONAL RESEARCH BRIEFS / INFORMATIONAL MEMORANDA

Vol. 01, No. 1, June 2001	Access to the UW System: Service Rates by Family Income
Informational Memorandum	Student Financial Aid: 1999-00 Update
Informational Memorandum	Degrees Conferred: 1999-00 Update
Informational Memorandum	The New Freshman Class: Fall 2000
Vol. 00, No. 1, June 2000	New Freshmen Outcomes: Retention and Graduation
Vol. 00, No. 2, August 2000	Access in the UW System
Informational Memorandum	Degrees Conferred: 1998-99 Update
Informational Memorandum	Student Financial Aid: 1998-99 Update
Informational Memorandum	The New Freshman Class: Fall 1999
Informational Memorandum	Trends in Enrollment: Fall 1999 Update
Vol. 99, No. 1: April 1999	The Graying of the Faculty in the UW System
Informational Memorandum	Trends in Enrollment: Fall 1998 Update
Informational Memorandum	Student Financial Aid: 1997-98 Update
Informational Memorandum	The New Freshman Class: Fall 1998
Vol. 98, No. 1: February 1998	Student Financial Aid in the UW System: 1996-97 Update
Vol. 98, No. 2: February 1998	Trends in Degrees Conferred: 1996-97 Update
Vol. 98, No. 3: May 1998	Transfer Students
Informational Memorandum	Trends in Enrollment: Fall 1997 Update
Vol. 97, No. 1: March 1997	Access Update: The Class Of Fall 1996
Vol. 96, No. 1: May 1996	New Freshman Outcomes: Retention and Graduation
Vol. 96, No. 2: September 1996	1994-95 Faculty Age Distributions In The UW System
Vol. 95, No. 1: February 1995	Trends In Enrollment: Fall 1994.
Vol. 95, No. 2: March 1995	Trends In Degrees Conferred: 1993-94 Update.
Vol. 95, No. 3: March 1995	Student Financial Aid Update: 1993-94.
Vol. 95, No. 4: May 1995	Access Update: The Class Of Fall 1994
Vol. 95, No. 5. May 1995	New Undergraduate Class: Fall 1994
Vol. 95, No. 6. December 1995	New Freshman Outcomes: Retention and Graduation
Vol. 94, No. 1: February 1994	Trends In Degrees Conferred, 1982-83 To 1992-93.
Vol. 94, No. 2: February 1994	Trends In Enrollment: Fall 1993 Update.
Vol. 94, No. 3: April 1994	Student Financial Aid In The UW System, 1992-93 Update.
Vol. 94, No. 4: April 1994	Meeting The Financial Aid Needs Of UW Resident Undergraduates.
Vol. 94, No. 5: May 1994	Access Update: The Class Of Fall 1993.
Vol. 94, No. 6: May 1994	The New Undergraduate Class: Fall 1993.
Vol. 93, No. 1: February 1993	Trends In Enrollment: Fall 1992 Update.
Vol. 93, No. 2: March 1993	APPENDIX Access Update: The Class of Fall 1992 Freshman Admission Requirements at the University of Wisconsin.
Vol. 93, No. 2: March 1993	Access Update: The Class Of Fall 1992.
Vol. 93, No. 3: March 1993	The New Undergraduate Class: Fall 1992.
Vol. 93, No. 4: March 1993	New Freshman Outcomes: Retention, Graduation And Time To Degree.
Vol. 93, No. 5: March 1993	Trends In Degrees Conferred, 1981-82 To 1991-92.
Vol. 92, No. 1: February 1992	Access To The UW System; Patterns Of Application, Admission and Enrollment Of New Freshmen.
Vol. 92, No. 2: March 1992	Trends In Degrees Conferred, 1980-81 To 1990-91.
Vol. 92, No. 3: April 1992	Trends In Enrollment: Fall 1991 Update.
Vol. 92, No. 4: May 1992	Minority Student Trends.
Vol. 92, No. 5: June 1992	Annual Status Report On Student Financial Aid In The UW System: 1990-91.
Vol. 92, No. 6: June 1992	Characteristics Of New Undergraduates: Fall 1991 Update.
Vol. 92, No. 7: October 1992	Trends In Faculty Teaching Assignments.
Vol. 91, No. 1: January 1991	Trends In Staffing.
Vol. 91, No. 2: March 1991	Outcomes Of New Freshman Students: Retention, Graduation and Time To Degree.
Vol. 91, No. 3: May 1991	Characteristics Of New Freshmen.
Vol. 91, No. 4: May 1991	Annual Status Report On Student Financial Aid In The UW System, 1989-90.
Vol. 91, No. 5: August 1991	Trends In Enrollment.

Copies are available from the University of Wisconsin System, Office of Policy Analysis and Research, 1534 Van Hise Hall, 1200 Linden Drive, Madison, Wisconsin 53706 Phone: (608) 262-6441. URL: http://www.uwsa.edu/opar/